

Mono-cyclohexyl phthalate

CAS No. 7517-36-4

Metabolite of dicyclohexyl phthalate (CAS No. 84-61-7)

Dicyclohexyl phthalate is used primarily in research laboratories. Human exposure to this phthalate would not be expected to be widespread. People exposed to dicyclohexyl phthalate will excrete mono-cyclohexyl phthalate in their urine. The amount of mono-cyclohexyl phthalate is an indicator of how much contact with dicyclohexyl phthalate has occurred.

Workplace air standards for external exposure have not been established for dicyclohexyl phthalate. Generally, dicyclohexyl phthalate has low acute toxicity. It has not

been completely classified as to its carcinogenicity (U.S. EPA, IARC, NTP).

Only 7.0% of the NHANES 1999-2000 subsample had detectable levels. In a previous study of a non-random subsample from NHANES III, Blount et al. (2000) also demonstrated a low detection rate (0.7 µg/L detection limit).

Table 68. Mono-cyclohexyl phthalate

Geometric mean and selected percentiles of urine concentrations (in µg/L) for the U.S. population aged 6 years and older, National Health and Nutrition Examination Survey, 1999-2000.

	Geometric mean (95% conf. interval)	Selected percentiles (95% confidence interval)						Sample size
		10th	25th	50th	75th	90th	95th	
Total, age 6 and older	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.00 (<LOD-1.50)	2541
Age group								
6-11 years	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.70 (1.00-3.80)	328
12-19 years	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.70 (1.00-2.40)	752
20 years and older	*	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	1461
Gender								
Males	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.00 (<LOD-1.70)	1215
Females	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.00 (<LOD-1.70)	1326
Race/ethnicity								
Mexican Americans	*	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	814
Non-Hispanic blacks	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.00 (.900-1.20)	603
Non-Hispanic whites	*	< LOD	< LOD	< LOD	< LOD	< LOD	.900 (<LOD-1.40)	911

< LOD means less than the limit of detection, which is 0.9 µg/L.

* Not calculated. Proportion of results below limit of detection was too high to provide a valid result.

Table 69. Mono-cyclohexyl phthalate (creatinine adjusted)

Geometric mean and selected percentiles of urine concentrations (in µg/gram of creatinine) for the U.S. population aged 6 years and older, National Health and Nutrition Examination Survey, 1999-2000.

	Geometric mean (95% conf. interval)	Selected percentiles (95% confidence interval)						Sample size
		10th	25th	50th	75th	90th	95th	
Total, age 6 and older	*	< LOD	< LOD	< LOD	< LOD	< LOD	3.00 (2.60-3.33)	2541
Age group								
6-11 years	*	< LOD	< LOD	< LOD	< LOD	< LOD	2.82 (1.54-6.00)	328
12-19 years	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.67 (1.33-1.82)	752
20 years and older	*	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	1461
Gender								
Males	*	< LOD	< LOD	< LOD	< LOD	< LOD	2.14 (1.67-3.00)	1215
Females	*	< LOD	< LOD	< LOD	< LOD	< LOD	3.28 (2.86-3.53)	1326
Race/ethnicity								
Mexican Americans	*	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	814
Non-Hispanic blacks	*	< LOD	< LOD	< LOD	< LOD	< LOD	1.43 (1.03-1.88)	603
Non-Hispanic whites	*	< LOD	< LOD	< LOD	< LOD	< LOD	3.00 (2.61-3.53)	911

< LOD means less than the limit of detection (see previous table).

* Not calculated. Proportion of results below limit of detection was too high to provide a valid result.